

Fig.1.

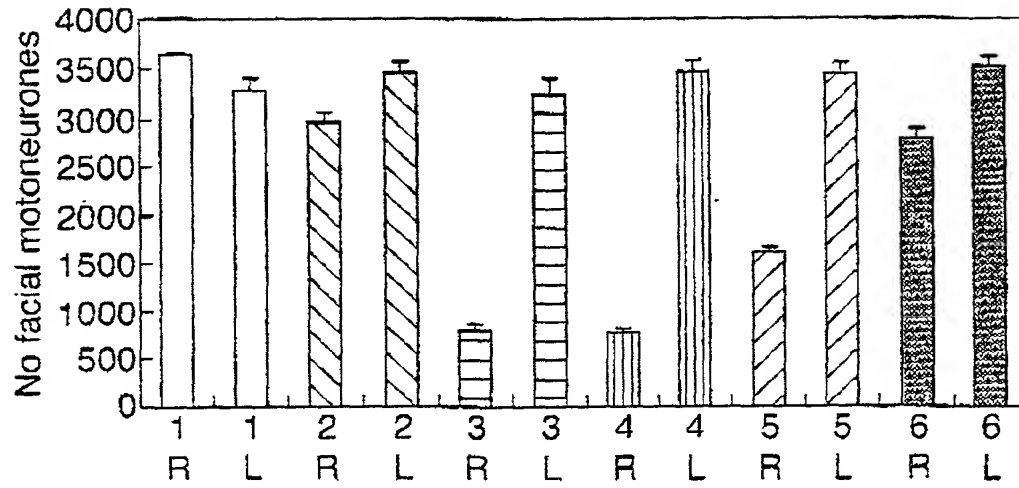
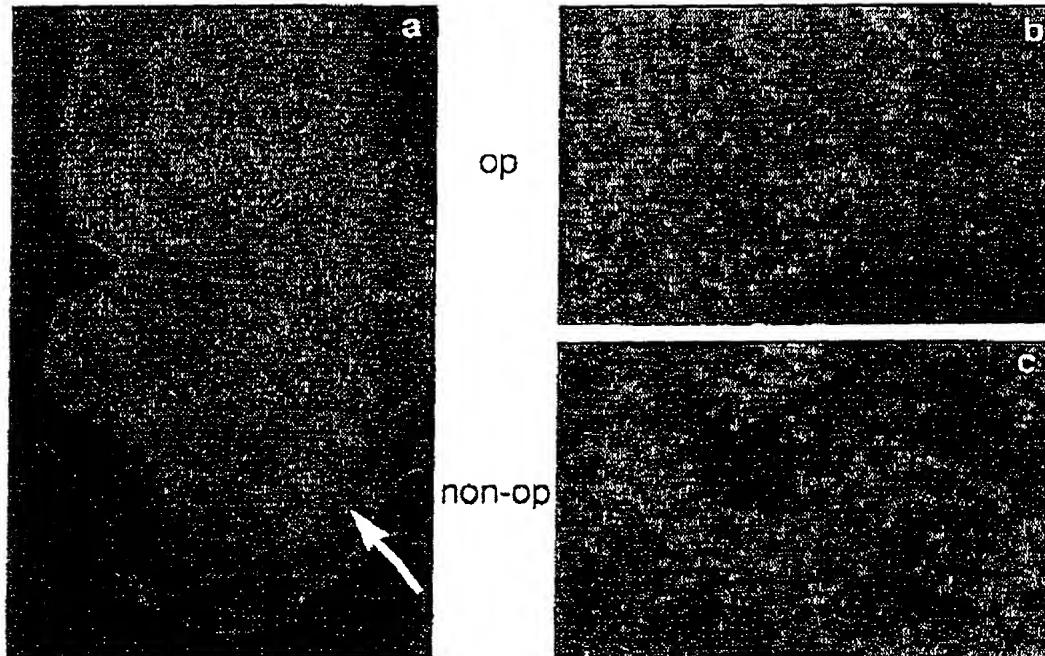


Fig.2.

Avulsion



2/10

Fig.3.
Plasmid

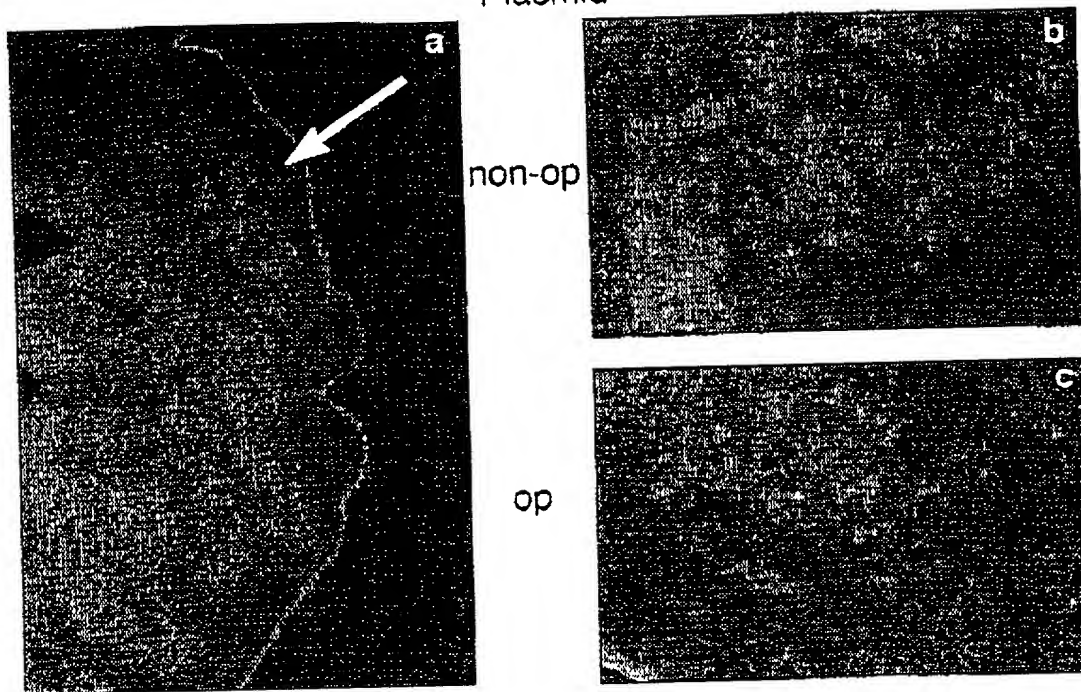


Fig.4.

MGF Plasmid

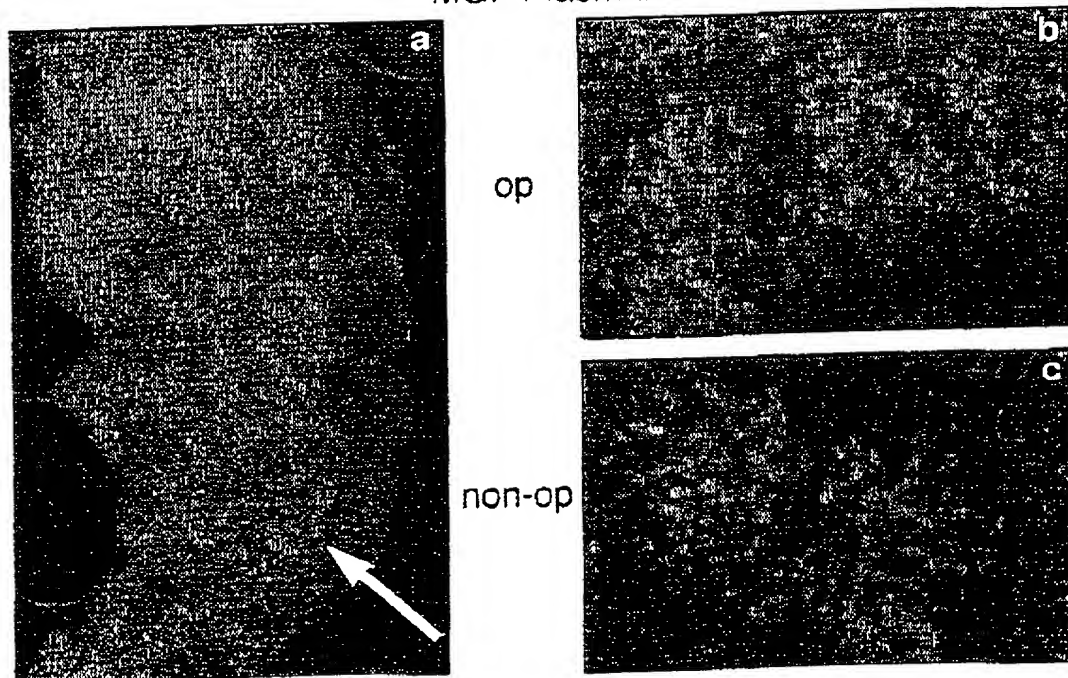


Fig.5.

cDNA sequence of Human MGF

Exon 1
 GGACCGGAGACCGCTCTCCGGGGCTGAGCTGGTGGATGCTCTTCAGTTCTGTGTGGAGACAGGGGCTTTTATTTCACAAGCCCCACAGGGTATGGCTCCAGCAGTCCGG
 Exon 4
 AGGGCGCTCAGACAGGCATCTGGGATGAGTCTGCTTCCGGAGCTGTGATCTAAGAGGCTGGAGATGTATTGGCCACCCCTCAAGCCTGCCAAGTCAGCTCGCTC
 Exon 5
 TGTCCGTGCCAGCGCCACACCCGACATGCCCAAGACCCAGAAAGTATCAGCCCCCATCTACCAACAAGAACCAAGTCTCAGAGAGGAAGGAAGTACATTGGAAG
 Exon 6
 AACACAAGTAGAGGGAGTGCAGGNAACAAGAACAACAGGATGTAGAGACCCCTTCTGAGGAGTGAAGAGGACAGGCCACCCGAGGACCCCTTGTCTCTGCACAGTTA
 CCTGTAAACATTGCAATACCGGCCCAAAAATAAGTTTGTATCATATTCAAAGATGGCATTTCCCCCAATGAATAACACAAAGTAAACAT

protein sequence of Human MGF

Exon 3
 GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerAr
 Exon 4
 gArgAlaProGlnThrGlyTlleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgS
 Exon 5
 erValArgAlaGlnArgHisThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysAsnThrLysSerGlnArgArgLysGlySerThrPheGlu
 Exon 6
 GluHisLys

Fig.6.

cdna sequence of Rat MGF

Exon 3
 GGACGAGAGACCCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTCTGTGTGGACCAAGGGCTTTTACTTCAACAGCCCCACAGTCATATGGCTCCAGCATTCG

Exon 4
 GAGGGCACACAGACGGGCAFTGTGGATGAGTGTGGCTTCCGAGCTGTGATCTGAGGAGGCTCGAGATGTACTGTGTCCGTGCAAGCCTACAAAGTCAGTCTCGTT

Exon 5
 CCATCCGGGCCAGGGCCACACTGACATGCCCAAGACTCAGAAGTCCCAGGCCCTATCGACACACAAAGGAAGCTGCCAAGCAGAAGGAAAGGAAGTACACTT

Exon 6
 GAAGAACACAACTAGAGGAAGTGCAGGAACAAGACCCTACAGAATGTAGGAGAGCCTCCCGAGGAACAGAAATGCCACGTCAACCGCAAGATCCCTTTGCTGCTTGA

GCAACCTGCAAAACATCGGAACACCTGCCAANTATCAATATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAATAACACAAGTAACAATCCCGGA

ATTC

protein sequence of Rat MGF

Exon 3
 GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleAr

Exon 4
 gArgAlaProGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgS

Exon 5
 erIleArgAlaGlnArgHisThrAspMetProLysThrGlnLysSerGlnProLeuSerThrHisLysLysArgLysLeuGlnArgArgLysGlySerThrLeu

Exon 6
 GluGluHisLys

Fig.7.

cdna sequence of Rabbit MGF

Exon 3
 GGACCGGAGACGCCTCTGGCGTGCTAGCTGGTGGATGCTCTTTCAGTTCTGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCACACAGGATACGGCTCCAGCACTCGGAGGGCACC
 Exon 4
 TCACACAGGCATCGTGGATGAGTGTCTTCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGCACCCCTCAAGCCGGCAAGGCGAGCCGCTCCGTCCGTGCCCCAGGGCC
 Exon 5
 ACACCGACATGCCCCAAGACTCAGAAGTATCAGCCTCCATCTACCAACAAGAAAATGAAGTCTCAGAGGAGAGGAAGGAAGTACATTTGAAGAACAACAAGTAGAGGAGTGCAGG
 Exon 6
 AAACAAGAACTTACAGGATGTAGGAAGACCTTCTGAGGAGTGAAGAAGACAGGCCACCCGAGGACCCCTTTGCTCTGCACAGTTACTTGTAACATTTGGAATACCCGGCCAAAAAAT
 AAGTTTGATCACATTTCAAAGATGGCATTTTCCCCCAATGAATAATACACAAGTAACATTC

Protein sequence of Rabbit MGF

Exon 3
 GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr
 Exon 4
 oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysAlaAlaArgSerValArgAlaGlnArgH
 Exon 5
 isThrAspMetProLysThrGlnLysTyrGlnProProSerThrAsnLysLysMetLysSerGlnArgArgGlySerThrPheGluGluHisLys
 Exon 6

Fig.8.

cDNA sequence of Human L.IGF-1

Exon 3
 GGACCGAGACGCTCTGCGGGCTGAGCTGGTGGATGCTCTTCAGTTCGTGTGGAGACAGGGGCTTTTATTTCAACAAGCCCAACAGGTATGGCTCCAGCAGTCGGAGGGCGCC

Exon 4
 TCAGACAGGCATCCTGGATGAGTGTCTCCGGAGCTGTGATCTAAGGAGGCTGGAGATGTTATTTGGCAACCCCTCAAGCCTGCCAAGTCAGCTCGCTCTGTCCGTGCCAGCGCC

Exon 6
 ACACCGACATGCCCAAGACCCAGAGGAAGTACATTTGAAGACGCAAGTAGAGGGAGTGCAGGAAACAAGAACTACAGGATGTAG

protein sequence of Human L.IGF-1

Exon 3
 GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnPheValCysGlyAspArgGlyPheTyrPheAsnLysProThrGlyTyrGlySerSerSerArgArgAlaPr

oGlnTheGlyIleValaspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysAlaProLeuLysProAlaLysSerAlaArgSerValArgAlaGlnArgH

Exon 6
 isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnAlaSerArgGlySerAlaGlyAsnLysAsnTyrArgMet

Fig.9.

cdna sequence of Rat L.IGF-1

Exon 3

GGACCACAGACCCCTTTGCGGGGCTGAGCTGGTGGACGCTCTTCAGTTGCTGTGTGGACCAAGGGGCTTTTACTTCAACAAGCCCACAGTCTATGGCTCCAGCATTCGGAGGGCACC

Exon 4

ACAGACGGGCATTGTGGATGAGTGTTCCTTCGGAGCTGTGATCTGAGGAGGCTGGAGATGTACTGTGTCGGCTGCAGGCCCTACAAGTCAGCTCGTTCCATCCGGGCCCCAGCGGCC

Exon 6

ACACTGACATGCCCAAGACTCAGAAGGAAGTACACTTGAAGAACAACAAGTAGAGGAAGTGCAGGAACAACAGACCTACAGAATGTAGGAGAGCCTCCCGAGGACACAGAAAATGCCA

CGTCACCGCAAGATCCTTTTGCTGCTTGAGCAACCTTGCAAAACATCGGAACACCTGCCAAATATCAATAATGAGTTCAATATCATTTTCAGAGATGGGCATTTCCCTCAATGAATATAC

ACAAGTAAACATTCCTCCGGGAATTC

7/10

Protein sequence of Rat L.IGF-1

Exon 3

GlyProGluThrLeuCysGlyAlaGluLeuValAspAlaLeuGlnpheValCysGlyProArgGlyPheTyrPheAsnLysProThrValTyrGlySerSerIleArgArgAlaPr

Exon 4

oGlnThrGlyIleValAspGluCysCysPheArgSerCysAspLeuArgArgLeuGluMetTyrCysValArgCysLysProThrLysSerAlaArgSerIleArgAlaGlnArgH

Exon 6

isThrAspMetProLysThrGlnLysGluValHisLeuLysAsnThrSerArgGlySerAlaGlyAsnLysTyrTyrArgMet

cDNA sequence of Rabbit-LIGF-1

AACATTC

Protein Sequence of Rabbit L.IGF-1

Exon 3

Exon 6

Fig. 11.

Exon 4																									
Hu MGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Rat MGF -	A	sn	Lys	Pro	Thr	Val	Tyr	Gly	Ser	Ile	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Rab MGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Hu IGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Rat IGF -	A	sn	Lys	Pro	Thr	Val	Tyr	Gly	Ser	Ile	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Rab IGF -	A	sn	Lys	Pro	Thr	Gly	Tyr	Gly	Ser	Ser	Arg	Arg	Ala	Pro	Gln	Thr	Gly	Ile	Val	Asp	Glu	Cys	Cys	Phe	
Hu MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ser	Ala	Arg	Ser	Val	
Rat MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Val	Arg	Cys	Lys	Pro	Thr	Lys	Ser	Ala	Arg	Ser	Ile	
Rab MGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ala	Arg	Ser	Val		
Hu IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ser	Ala	Arg	Ser	Val	
Rat IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Val	Arg	Cys	Lys	Pro	Thr	Lys	Ser	Ala	Arg	Ser	Ile	
Rab IGF -	Arg	Ser	Cys	Asp	Leu	Arg	Arg	Leu	Glu	Met	Tyr	Cys	Ala	Pro	Leu	Lys	Pro	Ala	Lys	Ala	Arg	Ser	Val		
Exon 5																									
Hu MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		Tyr	Gln	Pro	Pro	Ser	Thr	Asn	Lys	Asn	Thr	Lys
Rat MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		Ser	Gln	Pro	Leu	Ser	Thr	His	Lys	Lys	Arg	Lys
Rab MGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		Tyr	Gln	Pro	Pro	Ser	Thr	Asn	Lys	Lys	Met	Lys
Hu IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Rat IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Rab IGF -	Arg	Ala	Gln	Arg	His	Thr	Asp	Met	Pro	Lys	Thr	Gln	Lys		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Exon 6																									
Hu MGF -	Ser	Gln		Arg	Arg	Lys	G		ly	Ser	Thr	Phe	Glu	Glu	His	Lys									
Rat MGF -	Leu	Gln	Arg	Arg	Arg	Lys	G		ly	Ser	Thr	Leu	Glu	Glu	His	Lys									
Rab MGF -	Ser	Gln	Arg	Arg	Arg	Lys	G		ly	Ser	Thr	Phe	Glu	Glu	His	Lys									
Hu IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									
Rat IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									
Rab IGF -	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----									

Fig. 12.

